Gibe's UNIX COMMAND Bible

The latest file from the Cow's Information Series, Franken's UNIX Command Bible is suitable for the UNIX dilettante, as well as for the hardcore hack. Provides easy reference for those hard-to-remember commands. Attractive print-out fits well in any decor.

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Command	Description
awk	Search for a pattern within a file. Includes a built-in programming language.
bdiff	Compares two large files.
bfs	Scans a large file.
cal	Displays a calendar.
cat	Concatenates and prints files.
cc	C compiler.
cd	Change directory.
chgrp	Changes a file's group ownership.
chmod	Changes a file's access permissions.
chown	Changes the individual ownership of a file.
cmp	Compares two files; diplays the location (line and byte) of the 1st difference between these.
comm	Compares two files so as to determine which lines are common to both.
cp	Copies a file to another location.
cu	Calls another UNIX system.
date	Returns the date and time.
df	Displays free space in the file system.
diff	Displays the differences between two files or directories.
diff3	Displays the differences between three files or directories.
du	Reports on file system usage.

echo	Displays its argument.
ed	Text editor.
ex	Text editor.
expr	Evaluates its argument which is generally a mathematical formula.
f77	FORTRAN compiler.
find	Locates the files w/ specified characteristics.
format	Initializes a floppy disk.
grep	Searches for a pattern within a file. (see awk)
help	Salvation.
kill	Ends a process.
ln	Used to link files.
lpr	Copies the file to the line printer.
ls	Displays info. about one or more files.
mail	Used to receive or deliver e-mail.
mkdir	Creates a new directory.
more	Displays a long file so that the user can scroll through it.
mv	Used to move or rename files.
nroff	Used to format text.
ps	Display a process's status.
pwd	Display the name of the working directory.
rm	Removes one or more files.
rmdir	Deletes one or more directories.
sleep	Causes a process to become inactive for a specified length of time.
sort	Sort and merge one or more files.
spell	Finds spelling errors in a file.
split	Divides a file.
stty	Display or set terminal parameters.
tail	Displays the end of a file.
troff	Outputs formatted output to a typesetter.
tset	Sets the terminal type.
umask	Allows the user to specify a new creation mask.
uniq	Compares 2 files. Finds and displays lines in one file that are unique.

uucp	UNIX-to-UNIX execute.
vi	Full screen editor.
wc	Displays details in the file size.
who	Info. on who else be online.
write	Used to send a message to another user.

That's the Summary. Now print it out, if you'd like. Good for fast referencing. Following the Summary is a more in-depth look at each of the commands already listed.

awk program filenames
awk -f programfilenames filenames

The [awk] utility can be used to find any lines in a file which match a certain pattern; once found, these lines can be processed. In the first configuration, the program that [awk] is to execute is specified in the command line. In the second, the program is stored as the file given in programfilename. The -f option instructs [awk] to read this file.

[bdiff] is used to compare files too large for [diff]. See [diff] for the format.

bfs filename

[bfs] is used to scan a large file to determine where to split it into smaller files.

cal 01-12 (month) 0-9999 (year)

[cal] utility can be used to display a calendar of any year from 0 to 9999 AD, and any or all of the twelve months.

cat filename

[cat] can be used to examine a short file. See [more] for lengthier files.

number[cc]

The [cc] command changes the entire current line, or a group of lines starting with the current line. [number] represents the number of old lines to be deleted.

cd directory name

The [cd] command causes the current working directory to be changed. The [directory name] can be either a full or partial path name.

chgrp groupname filename

This command changes the group ownership of a file.

chmod {ugoa} {+-} {rwx}

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The [chmod] utility changes a file's access permissions. [u] specifies the user or owner's login name, [g] specifies a group and [o] indicates all others. [a] indicates the user, group, and all others; c'est the default. [+] adds permission; [-] deletes it. [r] indicates read, [w] write, and [x] execute.

chown individualname filename
~~~~~~~~~~~~~~~~~~~~~~~~~~~~
[chown] changes the individual ownership of a file (see chgrp).

cmp filename1 filename2
~~~~~~~~~~~~~~~~~~~~~~
[cmp] is one of the four principle UNIX file comparison utilities. It compares 2 files, and returns the positions where they differ.

comm -options filename1 filename2
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
The [comm] utility, in comparing two files, produces three columns of output. The first contains lines unique to the first file, the second, lines unique to the second, and the third column, lines common to both files. By placing the numbers [1], [2], and/or [3] in the [options] position, any one (or more) of these columns can be suppressed.

cp sendingfile receivingfile
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The [cp] command copies a file. [sendingfile] is the file to be copied, [receivingfile] is the file to which it is copied.

diff [options] filename1 filename2
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Again, a file comparison utility. However, with [diff], the differences are displayed as instructions that can be used to edit the files so that they are identical.

diff3 filename1 filename2 filename3
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Similar to [diff], [diff3] is unique in that it can compare three files. Gee.

ed filename
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One of the UNIX's three editing utilities, [ed] is a basic line editor. I'm sure there are other files that will explain how to use [ed]. Thus, I'll confine myself to a rough outline:

```
e filename ........... edit a different file
f filename ........... changes the currently specified file.
h .................... provides explanation of errors.
I
text ................. inserts text before the current line.
line,linel ........... lists the specified lines.
line,linen ........... displays specified lines, preceded by
                       their line numbers.
q ..................... exit from [ed]
w ..................... writes buffer to current filename.
+ or - ............... +number of lines closer to end
                       -number of lines closer to beginning.
```

expr formula
~~~~~~~~~~~
Utility which evaluates an expression.
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find directory searchcriteria parameter actioncriteria parameter

The [find] utility can be very useful indeed, especially when confronted by a UNIX with countless files. Basically, this command finds files which meet certain criteria, and then performs an operation (such as printing the files). Search criteria consists of the following:

Criteria	Parameter	Description
-name	filename	Files whose names match [filename] will meet this criteria.
-type	filetype [b] block special [c] character spec. file [d] directory file [f] plain file	Files whose type matches that specified will meet criteria.
-links	+/- x	Files with # of links indicated by + or - x meet this criteria.
-user	login name or user ID #	Files belonging to user with given login name or ID # meet criteria.
-group	group name or group ID #	Files belonging to group with given group name or ID # meet this criteria.
-size	+ or - x	Files greater than +x bytes or less than -x bytes meet this criteria.
-atime	+ or - x	Files not accessed within +x days, accessed within -x days, or accessed x days ago meet criteria.
-mtime	+ or - x	Files NOT modified within +x days, modified within -x days, or modified x days ago will meet this criteria.
-newer	filename	Files modified more recently than [filename] meet this criteria.
Action Criteria		
-print	-	When search criteria are met, path name of the file is displayed.
-exec	command{ }\;	Executes given command when search criteria are met. { } indicates filename, [\;] ends the command.
-ok	command{ }\;	Exactly like -exec, except user is prompted [y] or [n] before command.

grep -options searchstring filenames

Another search command, this for a particular string of chars.

ln original new

[ln] establishes a file link. For this utility, [original] represents the filename to be linked, [new] the filename of the new link to the original.

[ls] provides directory information. [ls -l/] displays a more complete version of the info. list.

mail username username

This utility allows e-mail to be sent to other system users.

mail

Simply typing [mail] checks the user's own mailbox.

When sending mail, several items must be set:
~s text ..... sets the subject field
~c user names ..... sends other users carbon copies of mail
m user names ..... activates the compose mode, with the
specified users as the message's recipients.
~h ..... displays and allows editing of all headers.
^D ..... ends message editing; sends mail.
~r filename ..... places file in body of message (keen command)

Reading One's Own Mail:
h number or range ..... causes specified headers to be displayed
p message # ..... displays entire message
d number or range ..... deletes specified messages
u number or range ..... undelete specified mail during SAME
mail session (messages removed after q)
q ..... leave the post office

mkdir directoryname
~~~~~~~~~~~~~~~~~~
[mkdir] allows creation of a subdirectory, for your dining enjoyment.

more filename
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For longer files, [more] is a convenient utility. It will display the first screen of file data and then stop, allowing the user to control scrolling henceforth.

mv oldfilename newfilename
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The [mv] utility can be used simply to rename a file, or...

mv filea fileb... directory
~~~~~~~~~~~~~~~~~~~~~~~~~~
[mv] can also be used to move files to a new directory, provided the directory exists, and you have write access to it.

ps -options
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The [ps] command, by itself, displays the status of each active process controlled by your terminal. This status report includes the Process Identification Number (PID), the terminal (TTY), the time the process has been executing (TIME), and the command line used to execute the process (CMD).
[ps]'s three options include -a (displays info. on active processes controlled by any terminal), -x (info. on ALL active processes), and -l (an extensive status report on all active processes).

pwd
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[pwd] command displays the present working directory.

rm filename
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[rm] removes a file. More than one file can be specified.

rmdir directoryname
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This utility removes a directory, an EMPTY directory (save the hidden files).

sleep seconds
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The [sleep] utility causes a process to become inactive for a certain period of time. Max. seconds is 65,536 (about 18 hrs).

sort -options filenames
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[sort] merges and sorts files. Without options, [sort] orders files by the ASCII codes of the characters at the beginning of each line. Options include -b (leading blanks ignored), -d (only letters, digs, and blanks considered; "dictionary sort"), -f (case ignored), -n (numerical sort [for numerical data]), and -r (a reverse sort).

split -size original resulting
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
[split] divides a large file into smaller ones. [size] refers to the number of lines the resulting files contain, [original] is the name of the orig. file, and [resulting] represents the prefix name assigned to the newly created files.

umask ugo
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[umask] changes the file CREATION mask (see [chmod] for already existing files). Here, [u] represents the owner's access permission, [g] the group's a.p., and [o] the a.p. for all others.

[uucp] (UNIX to UNIX copy) can be used to send files to a remote UNIX, or retrieve files from the remote system. Other UNIX comm commands include [cu] (which establishes contact with another system), and [uux] (UNIX to UNIX execute; allows commands to be executed on a remote system).

wc -options filenames
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The [wc] utility displays file-size information. This includes the number of lines, words, and characters. By chosing the -l, -w, or -c options, the information can be limited to only line, word, or character number.

who
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A very useful command (which some systems respond to even before a user is actually logged on), [who] displays a list of users currently online. This list includes the user's name, terminal device # (tty), and the log-in time. [who am i] displays info. only on the user who executed the command.

Alright. You may have noticed that this isn't EXACTLY a Bible. I took the liberty of omitting some of the command explanations. But, if anyone REALLY wants to know more about [vi], or [stty], or (perhaps more justifiably) have a more comprehensive guide to the mail system, I'll be glad to write some 'by request' text files.

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